

Amendments to the Claims

The following Listing of Claims, in which deleted text appears ~~struck through~~ and inserted text appears underlined, will replace all prior versions, and listings, of claims in the application:

1. (currently amended) A method for improving the efficiency of transfer of a nucleic acid into a plant cell having an intact cell wall and contained in a seed, comprising the steps of:
 - a) holding a seed containing the cell under a pressure different from an atmospheric pressure wherein the pressure is reduced by about 0.096 MPa from the atmospheric pressure;
 - b) placing the seed containing the cell and the nucleic acid under conditions to induce electroporation; and
 - c) transferring the nucleic acid into the plant cell using electroporation.
- 2-3. (previously canceled)
4. (previously presented) The method according to claim 1, wherein the step of holding the cell under the pressure different from the atmospheric pressure is performed before the step of placing the cell and the nucleic acid under the conditions capable of inducing electroporation.
5. (previously canceled)
6. (previously presented) The method according to claim 1, wherein step c) comprises applying a voltage pulse of 10 V/cm to 200 V/cm to the cell and the nucleic acid in at least two directions.
7. (previously canceled)
- 8-9. (canceled herewith).
10. (currently amended) The method according to claim 1, wherein the plant cell is from a monocotyledonous plant.
11. (previously presented) The method according to claim 10, wherein the monocotyledonous plant is a plant of the family *Gramineae*.
12. (previously presented) The method according to claim 11, wherein the plant of the family *Gramineae* is wheat (*Triticum aestivum* L.).
13. (previously presented) The method according to claim 11, wherein the plant of the family *Gramineae* is rice (*Oryza sativa* L.).

14. (previously presented) The method according to claim 11, wherein the plant of the family *Gramineae* is maize (*Zea mays* L.).
15. (currently amended) The method according to claim 1, wherein the plant cell is from a dicotyledonous plant.
16. (previously presented) The method according to claim 15, wherein the dicotyledonous plant is a plant of the family *Cruciferae*.
17. (previously presented) The method according to claim 16, wherein the plant of the family *Cruciferae* is Chinese cabbage (*Brassica rapa* L.).
18. (previously presented) The method according to claim 16, wherein the plant of the family *Cruciferae* is rape (*Brassica napus* L.).
19. (previously presented) The method according to claim 15, wherein the dicotyledonous plant is a plant of the family *Leguminosae*.
20. (previously presented) The method according to claim 19, wherein the plant of the family *Leguminosae* is soybean (*Glycine max* Merr).
21. (previously presented) The method according to claim 15, wherein the dicotyledonous plant is a plant of the family *Solanaceae*.
22. (previously presented) The method according to claim 21, wherein the plant of the family *Solanaceae* is tomato (*Lycopersicum esculentum* Mill).
23. (previously presented) The method according to claim 15, wherein the dicotyledonous plant is a plant of the family *Cucurbitaceae*.
24. (previously presented) The method according to claim 23, wherein the plant of the family *Cucurbitaceae* is Japanese cantaloupe (*Cucumis melo* L.).
25. (previously presented) The method according to claim 15, wherein the dicotyledonous plant is a plant of the family *Convolvulaceae*.
26. (previously presented) The method according to claim 25, wherein the plant of the family *Convolvulaceae* is morning glory (*Pharbitis nil* Choisy).

27. (currently amended) A method for improving the efficiency of introducing a nucleic acid into a cell of a plant, wherein the cell has an intact cell wall, comprising the steps of:

- a) holding a seed containing the cell under a pressure different from an atmospheric pressure wherein the pressure is reduced by about 0.096 MPa from the atmospheric pressure;
- b) placing the seed containing the cell and the nucleic acid under conditions to induce electroporation and introducing the nucleic acid into the cell using electroporation; and
- c) differentiating, growing, and/or multiplying the cell.

28. (previously canceled)

29. (canceled herewith)

30. (currently amended) The method according to claim ~~29~~27, wherein the seed is a monocotyledonous plant seed.

31. (previously presented) The method according to claim 30, wherein the monocotyledonous plant seed is a seed of the family *Gramineae*.

32. (previously presented) The method according to claim 31, wherein the seed of the family *Gramineae* is a wheat (*Triticum aestivum* L.) seed.

33. (previously presented) The method according to claim 31, wherein the seed of the family *Gramineae* is a rice (*Oryza sativa* L.) seed.

34. (previously presented) The method according to claim 31, wherein the seed of the family *Gramineae* is a maize (*Zea mays* L.) seed.

35. (currently amended) The method according to claim ~~29~~27, wherein the seed is a dicotyledonous plant seed.

36. (previously presented) The method according to claim 35, wherein the dicotyledonous plant seed is a seed of the family *Cruciferae*.

37. (previously presented) The method according to claim 36, wherein the seed of the family *Cruciferae* is a Chinese cabbage (*Brassica rapa* L.) seed.

38. (previously presented) The method according to claim 36, wherein the seed of the family *Cruciferae* is a rape (*Brassica napus* L.) seed.

39. (previously presented) The method according to claim 35, wherein the dicotyledonous plant seed is a seed of the family *Leguminosae*.

40. (previously presented) The method according to claim 39, wherein the seed of the family *Leguminosae* is a soybean (*Glycine max* Merr) seed.
41. (previously presented) The method according to claim 35, wherein the dicotyledonous plant seed is a seed of the family *Solanaceae*.
42. (previously presented) The method according to claim 41, wherein the seed of the family *Solanaceae* is a tomato (*Lycopersicum esculentum* Mill) seed.
43. (previously presented) The method according to claim 35, wherein the dicotyledonous plant seed is a seed of the family *Cucurbitaceae*.
44. (previously presented) The method according to claim 43, wherein the seed of the family *Cucurbitaceae* is a Japanese cantaloupe (*Cucumis melo* L.) seed.
45. (previously presented) The method according to claim 35, wherein the dicotyledonous plant seed is a seed of the family *Convolvulaceae*.
46. (previously presented) The method according to claim 45, wherein the seed of the family *Convolvulaceae* is a morning glory (*Pharbitis nil* Choisy) seed.
47. (previously presented) A plant, produced by a method according to any one of claims 27 or 30-46.
48. (previously presented) The plant according to claim 47, which does not contain a somaclonal variation.
49. – 70. (canceled)
71. (currently amended) A plant, produced by a method according to claim ~~29~~27.